



**Telecom and Energy Access Issues in  
California's Tribal Regions  
NARUC Winter Meetings  
Washington, D.C.  
February 15-17, 2016**

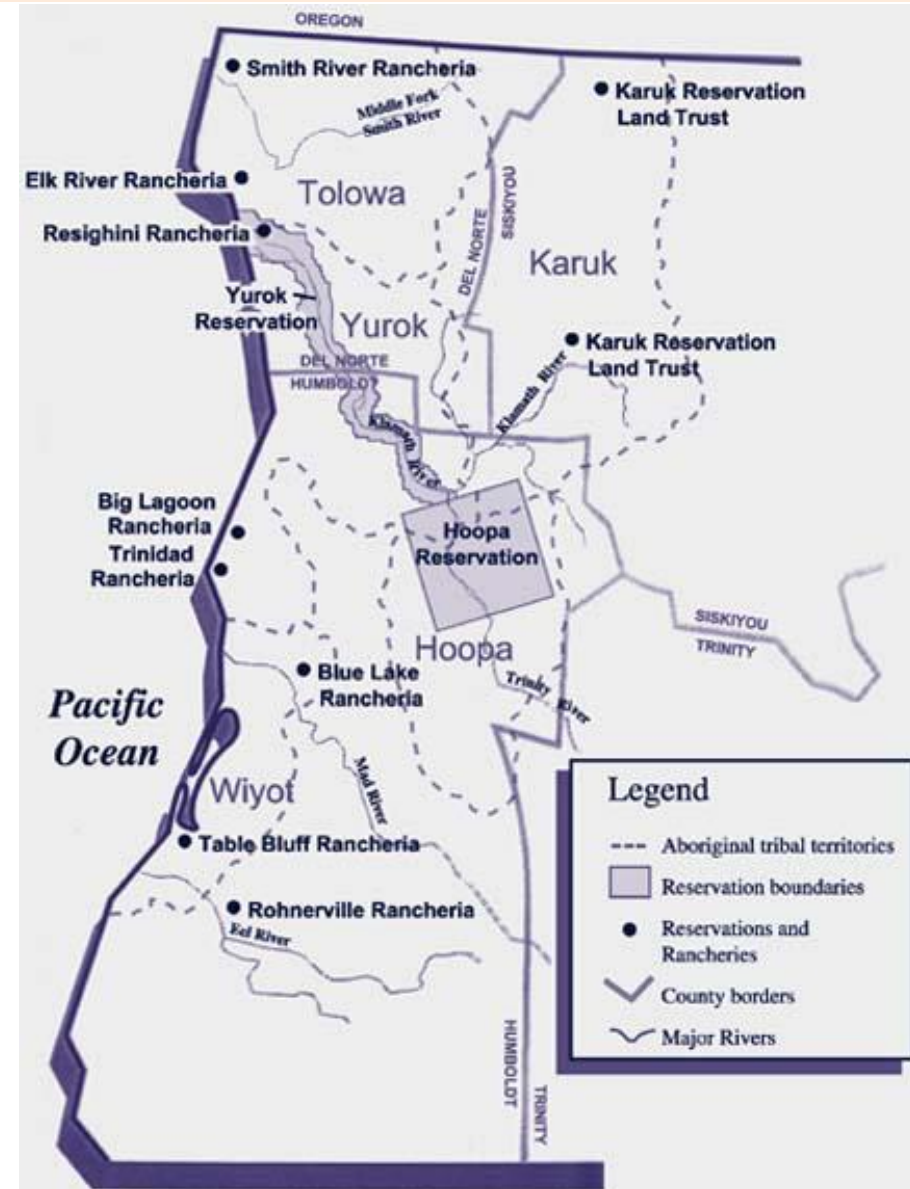


Commissioner Catherine J.K. Sandoval  
California Public Utilities Commission



# California Tribal Lands and River Tribal Regions

## 109 Federally Recognized Tribes in California







# The Klamath River Region of Northwestern California





# Yurok Veterans Memorial; The forest limits solar production and wireless signal propagation.





Fiber Route for  
California  
Advanced  
Services Fund &  
Tribal *Klamath  
River Rural  
Broadband  
Initiative  
(KRRBI)*

CalFire Lookout, Bald Hills  
Rd. on KRRBI route,  
Improving Public Safety  
through Broadband







**Yurok Tribal  
Fisheries,  
Inspecting  
Sturgeon Catch,  
Klamath River**

**Yurok Fish Patrol,  
Klamath River, Can Use  
Broadband to Improve  
Fishery Management  
and Tribal Government  
Operations**







## Johnson's/Wautec, Upriver at the Yurok Reservation



Upriver communities on the Yurok Reservation home to ~180 households: Limited electricity access. Many households have no electric access and depend on diesel (15kW generator @ 1 gallon per hour @ \$3.00 per gallon or ~\$11,000 per year for 10 hour per day operation). Some households use wood for heat or cooking. Median income \$20,000 per year.





Bald Hills Road from  
Hwy 169 to Hwy 101  
– Fiber Route for  
CASF- funded  
*Klamath River Rural  
Broadband Initiative*,  
Yurok and Karuk  
Partnership

CalFire Lookout, Bald  
Hills Rd.







**Yurok's Jack  
Norton Elementary  
School, lacking  
telephone and  
electric lines**

**Jack Norton  
Elementary School is  
powered by diesel  
generators that  
consume about 6,000  
gallons of diesel per  
year, costing  
approximately \$18,000**







## **End of the Electric Line on the Yurok Reservation.**

**130 of the 180 households in the Yurok Reservation “Upriver Communities” lack electric power. They rely on diesel generators, wood, or limited solar in the forest area, often spending \$600 a month or more on diesel and wood.**

**Such households are ineligible for the CPUC’s energy savings assistance or energy efficiency programs or California Alternative Rates for Energy bill subsidies because they are not utility customers. Median Household annual income is \$20,000**







At the Tyners  
celebrating their  
first phone  
service, Yurok  
Reservation,  
April 2014





# Karuk Computer Center, Orleans, CA









**Verizon microwave facility, Orleans. Fiber backhaul is being installed to increase reliability**

**Verizon passive reflector used to propagate microwave signal**





# **Karuk RUS-funded “Talking Line,”**

**Broadband Dedicated October 2015  
Orleans, CA**

**Klamath River Broadband Initiative  
funded by CASF leverages the Talking  
Line**







## **Building Broadband in Tribal Regions**

- **Connect America Fund will help fund broadband buildout in many areas.**
- **Carriers have 6 years to buildout until 2021. Must build to 40% of eligible households in 2017.**
- **Remote Area Fund rules and auctions are critical to many states including California.**
- **Must address Broadband Access and Adoption issues for Native Americans in both Urban and tribal areas**
- **Energy/Communications Nexus; Communications needs energy so must address energy access**
- **Communications/Energy/Water Nexus: Energy and Water facilities and services need Communications for operation, management, and control.**





# Tribal Consultation

- Tribal Consultation is key
- Consult and coordinate on opportunities for tribal economic development, infrastructure ownership, and participation in buildout
- Consult and coordinate on energy efficiency program adoption and deployment
- Consult and coordinate to ensure 9-1-1 access and communications access
- Consult and coordinate on water access and quality issues







# Thank you!

For more information, please contact:

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